

AN INTERLEAVED WEIGHTED FAIR QUEUING MECHANISM AND SYSTEM

ABSTRACT OF THE DISCLOSURE

5 Methods and apparatus for interleaved weighted fair data packet queue sequencing are disclosed. An interleaving table specifies a queue sequence. A queue sequencer follows the table order on an epoch-by-epoch basis, selecting a queue for each epoch based on the table order. If the selected queue does not have enough data to fill its epoch, the sequencer can step to the next queue in the table order. Because the table is interleaved, higher-priority
10 queues can be visited frequently, improving jitter and latency for packets associated with these queues. The table structure allows all queues at least some portion of the available output bandwidth, and can be organized to afford some queues a much larger portion without having those queues monopolize the output stream for inordinate amounts of time.

15 In some embodiments, each table entry has a programmable epoch value associated with it. The epoch value can be used to weight each table entry respective to the other entries.